

Amendment
U.S. Appl. No.: **10/595,623**
Attorney Docket No. **LAV0313157**

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently amended): A system for providing assistance in regenerating depollution means associated with oxidation catalyst-forming means integrated in an exhaust line of a motor vehicle diesel engine, and in which the engine is associated with common rail means for feeding fuel to the cylinders of the engine and adapted, at constant torque, to implement a strategy of regeneration by injecting fuel into the cylinders in at least one post-injection, the system comprising:

- means for detecting a request for regeneration, and thus for post-injection;
- means for detecting a ~~state~~ stage in which the vehicle accelerator pedal is being raised ~~or~~ and for detecting a stage in which the vehicle engine is idling;
- acquisition means for acquiring the temperature downstream from the catalyst-forming means;
- means for responding to said temperature to determine a maximum duration of post-injection application during stages in which the engine is returning to idling as a result of the accelerator pedal being raised and stages during which the engine is idling; and
- means for immediately interrupting the or each post-injection if the duration of post-injection utilization reaches the predetermined maximum duration of application during a stage of returning to idling, ~~and/or~~ and for progressively reducing the or each post-injection when

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the duration of post-injection utilization reaches the predetermined maximum duration of application during a stage of the engine idling.

2. (Previously presented): A system according to claim 1, wherein the reduction means are adapted to reduce the or each post-injection in application of a calibratable slope.

3. (Previously presented): A system according to claim 1, wherein the depollution means comprise a particle filter.

4. (Previously presented): A system according to claim 1, wherein the depollution means comprise a NOx trap.

5. (Previously presented): A system according to claim 1, wherein the fuel includes an additive for being deposited together with the particles with which it is mixed on the depollution means in order to facilitate regeneration thereof.

6. (Previously presented): A system according to claim 1, wherein the fuel includes an additive that forms a NOx trap.

7. (Previously presented): A system according to claim 1, wherein the engine is associated with a turbocharger.

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8. (New): A method of providing assistance in regenerating a depollution device associated with an oxidation catalyst integrated in an exhaust line of a motor vehicle diesel engine, and in which the engine is associated with a common rail for feeding fuel to the cylinders of the engine and adapted, at constant torque, to implement a strategy of regeneration by injecting fuel into the cylinders in at least one post-injection, e method comprising:

- detecting a request for regeneration, and thus for post-injection;
- detecting any of (i) a stage in which the vehicle accelerator pedal is being raised, and (ii) a stage in which the vehicle engine is idling;
- acquiring the temperature downstream from the catalyst;
- responding to said temperature to determine a maximum duration of post-injection application during stages in which the engine is returning to idling as a result of the accelerator pedal being raised and stages during which the engine is idling; and
- (i) immediately interrupting the or each post-injection if the duration of post-injection utilization reaches the predetermined maximum duration of application during a stage of returning to idling, and (ii) progressively reducing the or each post-injection when the duration of post-injection utilization reaches the predetermined maximum duration of application during a stage of the engine idling.

9. (New): A method according to claim 8, wherein the or each post-injection are reduced in application of a calibratable slope.

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10. (New): A method according to claim 8, wherein the depollution device comprise a particle filter.

11. (New): A method according to claim 8, wherein the depollution device comprise a NOx trap.

12. (New): A method according to claim 8, wherein the fuel includes an additive for being deposited together with the particles with which it is mixed on the depollution device in order to facilitate regeneration thereof.

13. (New): A method according to claim 8, wherein the fuel includes an additive that forms a NOx trap.

14. (New): A method according to claim 8, wherein the engine is associated with a turbocharger.